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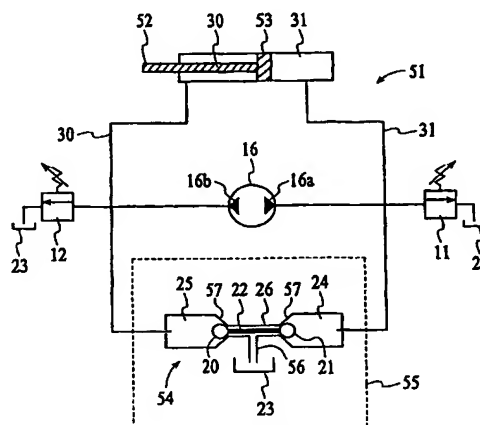
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ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: DUAL, COUPLED CHECK VALVE FOR DIRECT DRIVE, REVERSIBLE POWER SOURCES FOR HYDRAULIC SYSTEMS



(57) Abstract: An invented dual, coupled check valve mechanism is described for a direct drive, reversible hydraulic power source for hydraulic circuits that includes a manifold hydraulically coupled to the respective input/output ports and a reservoir of the hydraulic power source defining a translation passageway having mid-passage drain hydraulically coupled to the reservoir, where each end of the translation passageway has an angled annular valve seat opening to larger diameter plenum containing a check valve ball. A translating rod with a length greater and a circumferential diameter less than that of the translation passageway located in the translation passageway prevents the respective check valve balls from simultaneously seating on the valve seats at the respective ends of the translation passage way.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/08638

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : F16D 31/02

US CL : 60/476

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 60/476, 473, 486; 4/502

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EAST: pump, motor, reversible, relief, valve, pool cover

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2,657,533 A (SCHANZLIN et al) 03 November 1953 (03.11.1953), See figure 1	1-3
A, E	US 6,751,953 B2 (MENTINK et al) 22 June 2004 (22.06.2004), See figure 3	1, 2
A	US 6,470,678 B1 (HUBER) 29 October 2002 (29.10.2002), See figure 1	1, 2
A	US 4,565,334 A (RUHL) 21 January 1986 (21.01.1986), See figure 1	1, 4

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

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